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Metal Industry Indicators

Indicators of Domestic Primary Metals, Steel, Aluminum, and Copper Activity

June 2000

The primary metals leading index dropped sharply in May increasing the prospects for a downturn in U.S. primary metals activity in the coming months. The metals price leading index and the growth rate of U.S. inventories of metal products continue to signal weak growth for most metal prices in the near term.

A preliminary calculation of the **primary metals leading index** shows it plunging 2.6% in May, falling to 125.0 from a revised 128.3 in April. The index's 6-month smoothed growth rate, a compound annual rate that measures the near-term trend, also showed a large drop, down to -5.0% from a revised -0.2% in April. A growth rate below -1.0% usually signals a downward near-term trend for metals activity, while a growth rate above +1.0% usually signals an upward near-term trend.

The May primary metals leading index is preliminary because only four of its eight components were available for the index calculation. An unusually large drop in one component, the length of the average workweek in primary metals establishments, accounted for nearly all of the net decrease in the leading index. The 1.1-hour decrease in the workweek from April to May stands as the seventh largest decrease on record for this component and the largest since August 1971. The Purchasing Managers' Index component moved down again in May, following decreases in March and April, while the metals price index growth rate was essentially flat. The S&P stock price index for diversified machinery companies posted a modest increase. The magnitude of the May drop in the leading index, however, will likely be reduced when the other four components are included in the index calculation next month.

The growth rate of the leading index has been negative since last February, and it is signaling the possibility of a downturn in near-term domestic metals activity.

The **steel leading index** declined 0.5% in April, the latest month for which it is available, down to 110.4 from 110.9 in March. Its 6-month smoothed growth rate slipped to -3.1% from a revised -2.3% in March. In all, six of the index's nine components moved lower in April, with the largest negative contributions to the net decline in the leading index coming from the value of appliance shipments and new orders for steel mill products, both adjusted for inflation. The growth rate of the steel leading index points to a decline in U.S. steel industry activity in the coming months.

In April, the **aluminum mill products leading index** advanced to an all-time high, moving up 0.7% to 159.8 from a revised 158.7 in March. The index's 6-month smoothed growth rate also increased, rising to 2.6% from a revised 1.5% in March. Although only three of the index's seven components increased in April, two components, the growth rate of the inflation-adjusted M2 money supply and the length of the average workweek in aluminum sheet, plate, and foil establishments, registered large increases that accounted for most of April's net increase. In fact, the April increase in the money supply component was the largest in almost 5 years. The growth rate of this leading index continues to signal at least modest near-term growth for the domestic aluminum mill products industry.

The **primary aluminum leading index** slipped 0.4% in April, down to 91.1 from 91.5 in March, and the index's 6-month smoothed growth rate dipped to -1.6% from -0.4% in March. This marks the first time in over a year that the growth rate was below -1.0%, which normally signals a downward near-term trend in industry activity. The components for the spot price for primary aluminum on the London Metal Exchange and the ratio of shipments to inventories for motor vehicles and parts were the largest factors in the net decrease in the leading index. The recent performance of the leading index points to flat near-term growth in domestic primary aluminum activity. (Tables and charts for the primary aluminum indexes are in separate file.)

The **copper leading index** increased for the second straight month, advancing 0.6% in April to 129.0 from a revised 128.2 in March, while the index's 6-month smoothed growth rate rose to -2.7% from a revised -3.9% in March. However, without a large positive contribution from the S&P stock price index for building materials companies the leading index would have declined slightly. In May, this stock price index lost almost all of the ground that it had gained in April. Two other index components, though, also increased in April. Average weekly overtime hours in copper rolling and drawing mills rebounded from a

sharp drop in March, while the inflation-adjusted value of new orders for nonferrous metals increased to its highest level since last September. In spite of the performances of these components, the growth rate of the leading index still points to further declines in U.S. copper industry activity in the near future.

Metals Price Leading Index Signaling Little or No Growth for Most Metal Prices

The **metals price leading index** decreased 0.6% in April, the latest month for which it is available, down to 106.2 from a revised 106.8 in March, its fourth decline in 5 months. More importantly, the index's 6-month smoothed growth rate fell to -3.9% from a revised -3.3% in March. Two of the index's three available components for April decreased. These were the spread between the U.S. 10-year Treasury Note and the federal funds rate and the growth rate of the index measuring the trade-weighted average exchange value of other major currencies against the U.S. dollar. In contrast, the growth rate of the inflation-adjusted value of new orders for U.S. nonferrous metals posted its largest 1-month gain since last June. The fourth index component, the growth rate of the 14-Country Long Range Gauge calculated by the Economic Cycle Research Institute, is available only through March. Although it experienced a modest increase in March, its trend has been flat or declining slightly since last year.

The 6-month smoothed growth rate of the inflation-adjusted value of U.S. nonferrous metal products inventories increased to -1.4% in April from a revised -2.7% in March, the highest since last June. This indicator has an inverse relationship with metal prices. When the inventory growth rate increases, metal prices are more likely to decrease.

The decrease in the metals price leading index and the increase in the growth rate of metal inventories both point to weak growth in overall metals prices for the next few months. (The latest revision to the metals price leading index is described in the April 2000 Metal Industry Indicators.)

Table 1.
Leading Index of Metal Prices and Growth Rates of the Nonferrous Metals Price Index, Inventories of Nonferrous Metal Products, and Selected Metal Prices

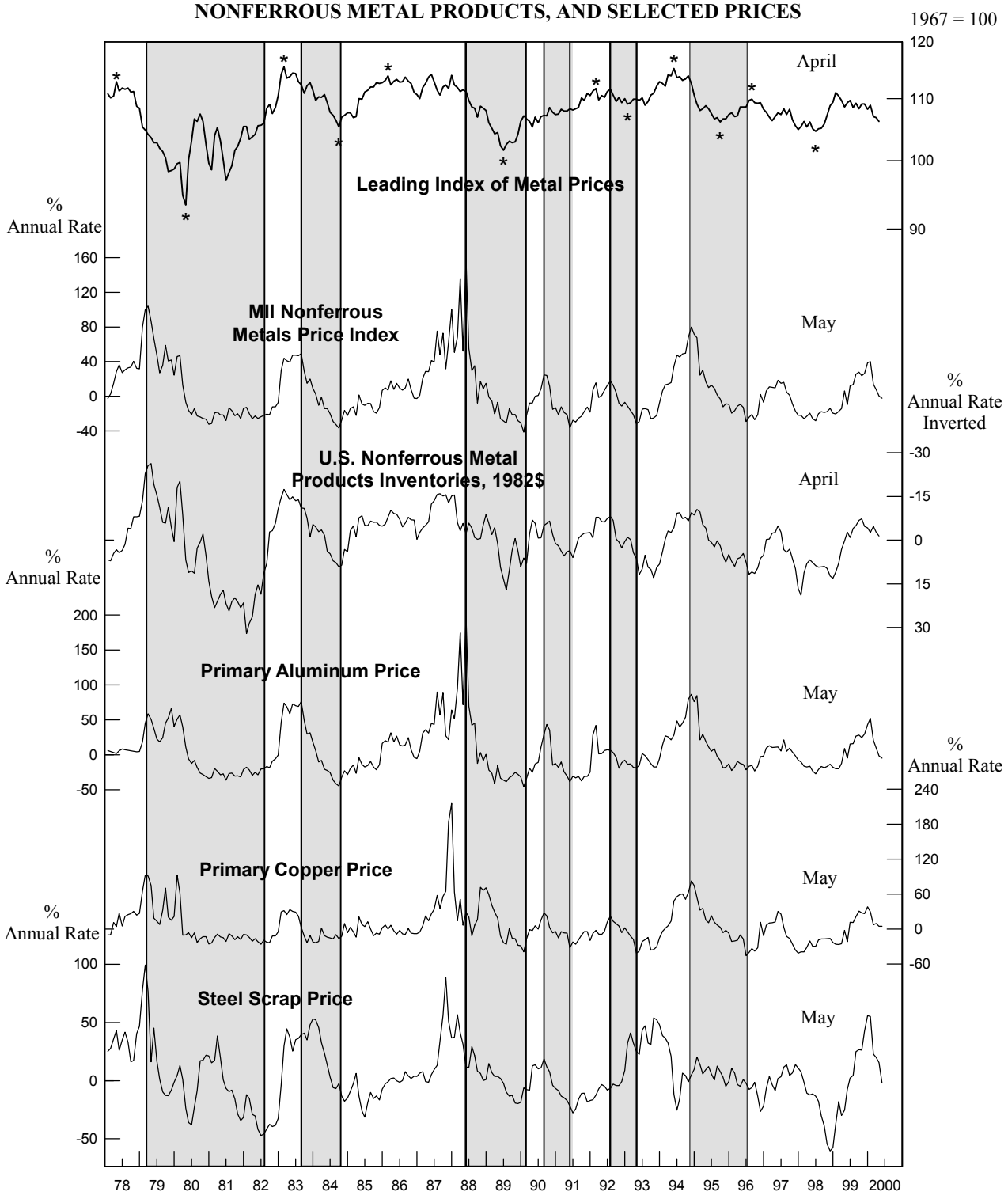
		Six-Month Smoothed Growth Rates				
	Leading Index of Metal Prices (1967=100)	MII Nonferrous Metals Price Index	U.S. Nonferrous Metal Products Inventories (1982$)	Primary Aluminum	Primary Copper	Steel Scrap
1999						
April	108.6r	6.4	0.2	8.8	-1.7	-25.3
May	109.3r	-9.6	-2.7	-4.9	-21.7	-7.6
June	109.7r	12.2	-0.9	15.3	11.7	2.2
July	108.5r	13.5	-4.0	15.8	11.4	4.4
August	109.2r	25.6	-5.0	26.7	21.7	24.9
September	108.3	27.9	-6.8	28.0	31.0	26.6
October	109.1r	23.8	-7.3	24.4	28.0	26.2
November	109.1r	26.6	-4.7	29.4	26.5	42.7
December	108.2	38.6	-4.2r	42.7	38.3	55.8
2000						
January	108.9r	40.1	-2.6	52.1	29.7	55.2
February	107.0r	13.7	-4.7	20.6	7.6	22.7
March	106.8r	7.8	-2.7r	9.6	9.8	19.8
April	106.2	0.4	-1.4	-1.7	4.9	15.7
May	NA	-2.3	NA	-4.9	4.9	-1.9

NA: Not available *r: Revised*

Note: The components of the Leading Index of Metal Prices are the spread between the U.S. 10-year Treasury Note and the federal funds rate, and the 6-month smoothed growth rates of the deflated value of new orders for nonferrous metals, the Economic Cycle Research Institute's 14-Country Long Range Gauge, and the reciprocal of the trade-weighted average exchange value of the U.S. dollar against other major currencies. The Metal Industry Indicators (MII) Nonferrous Metals Price Index measures changes in end-of-the-month prices for primary aluminum, copper, lead, and zinc traded on the London Metal Exchange (LME). The steel scrap price used is the price of No. 1 heavy melting. Inventories consist of the deflated value of finished goods, work in progress, and raw materials for U.S.-produced nonferrous metals and nonferrous metal products. Six-month smoothed growth rates are based on the ratio of the current month's index or price to its average over the preceding 12 months, expressed at a compound annual rate.

Sources: U.S. Geological Survey (USGS); American Metal Market (AMM); the London Metal Exchange (LME); the Bureau of the Census; the Economic Cycle Research Institute, Inc. (ECRI); and Federal Reserve Board.

CHART 1.
LEADING INDEX OF METAL PRICES AND GROWTH RATES OF NONFERROUS METALS PRICE INDEX, INVENTORIES OF NONFERROUS METAL PRODUCTS, AND SELECTED PRICES



Shaded areas are downturns in the nonferrous metals price index growth rate. Asterisks (*) are peaks and troughs in the economic activity reflected by the leading index of metal prices. Scale for nonferrous metal products inventories is inverted.

U.S. Geological Survey, June 2000

Table 2.
The Primary Metals Industry Indexes and Growth Rates

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
1999				
June	129.4r	5.0r	112.9r	2.8r
July	129.1r	4.3	113.7r	3.9r
August	129.3r	4.2r	114.2r	4.3r
September	128.5	2.5r	114.0r	3.6r
October	128.3r	1.5r	113.7r	2.8r
November	128.6r	1.7r	114.6r	3.8r
December	128.8	1.5r	115.2r	4.2r
2000				
January	129.9r	2.7r	115.6r	4.2
February	126.9r	-2.1r	115.2r	2.9r
March	126.6r	-2.6	116.0r	3.7r
April	128.3r	-0.2r	116.4	3.8
May	125.0	-5.0	NA	NA

NA: *Not available* ***r:*** *Revised*

Note: Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

Table 3.
The Contribution of Each Primary Metals Index Component to the Percent Change in the Index from the Previous Month

Leading Index	**April**	**May**
1. Average weekly hours, primary metals (SIC 33)	0.6r	-2.4
2. S&P stock price index, machinery, diversified	0.7r	0.2
3. Ratio of price to unit labor cost (SIC 33)	0.0	NA
4. Metals price index growth rate	-0.1r	0.0
5. New orders, primary metals, (SIC 33) 1982$	-0.2	NA
6. Index of new private housing units authorized by permit	-0.1	NA
7. Growth rate of U.S. M2 money supply, 1996$	0.5	NA
8. Purchasing Managers' Index	-0.1r	-0.4
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	1.3r	-2.6

Coincident Index	**March**	**April**
1. Industrial production index, primary metals (SIC 33)	0.4r	0.2
2. Total employee hours, primary metals (SIC 33)	0.1	0.4
3. Value of shipments, primary metals, (SIC 33) 1982$	0.1r	-0.3
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	0.7r	0.4

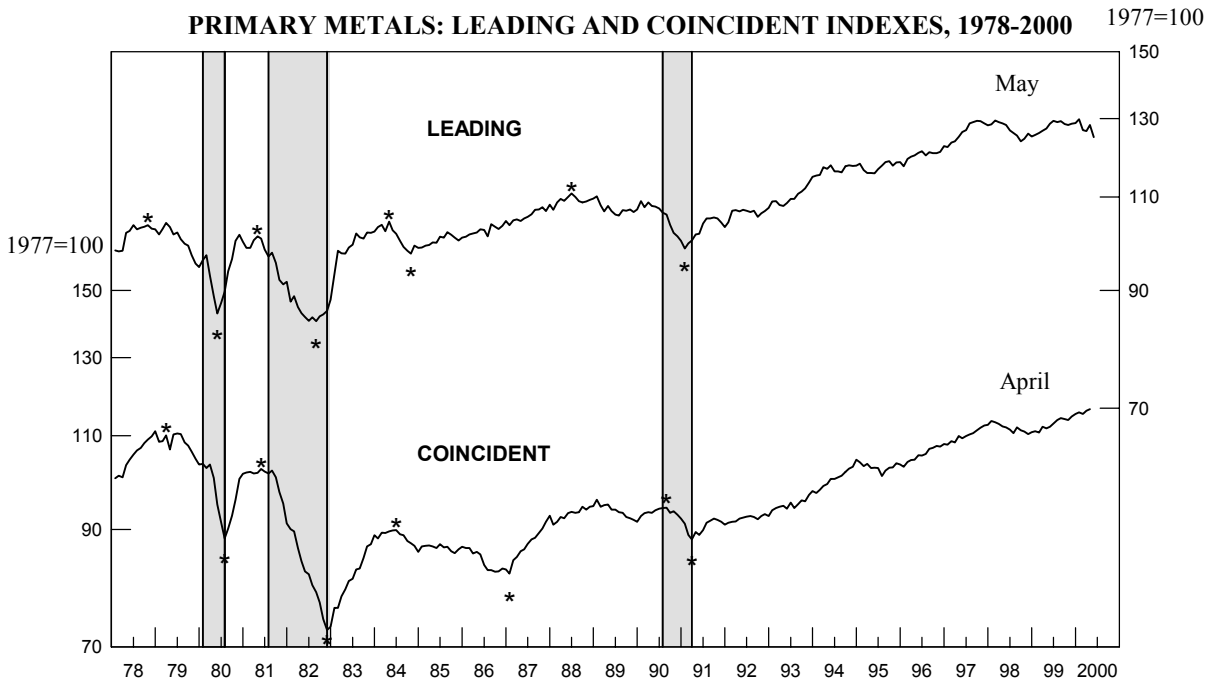
Sources: Leading: 1, Bureau of Labor Statistics; 2, Standard & Poor's; 3, U.S. Geological Survey; 4, Computed by the U.S. Geological Survey from individual monthly metals prices from the Journal of Commerce; 5, Bureau of the Census and U.S. Geological Survey; 6, Bureau of the Census and U.S. Geological Survey; 7, Federal Reserve Board, Conference Board, and U.S. Geological Survey; and 8, National Association of Purchasing Management. Coincident: 1, Federal Reserve Board; 2, Bureau of Labor Statistics and U.S. Geological Survey; 3, Bureau of the Census and U.S. Geological Survey. All series are seasonally adjusted, except 2, 3, and 4 of the leading index.

NA*: Not available* ***r:*** *Revised*

Note: A component's contribution, shown in Tables 3, 5, 7, and 9, measures its effect, in percentage points, on the percent change in the index. Each month, the sum of the contributions plus the trend adjustment equals (except for rounding differences) the index's percent change from the previous month.

CHART 2.

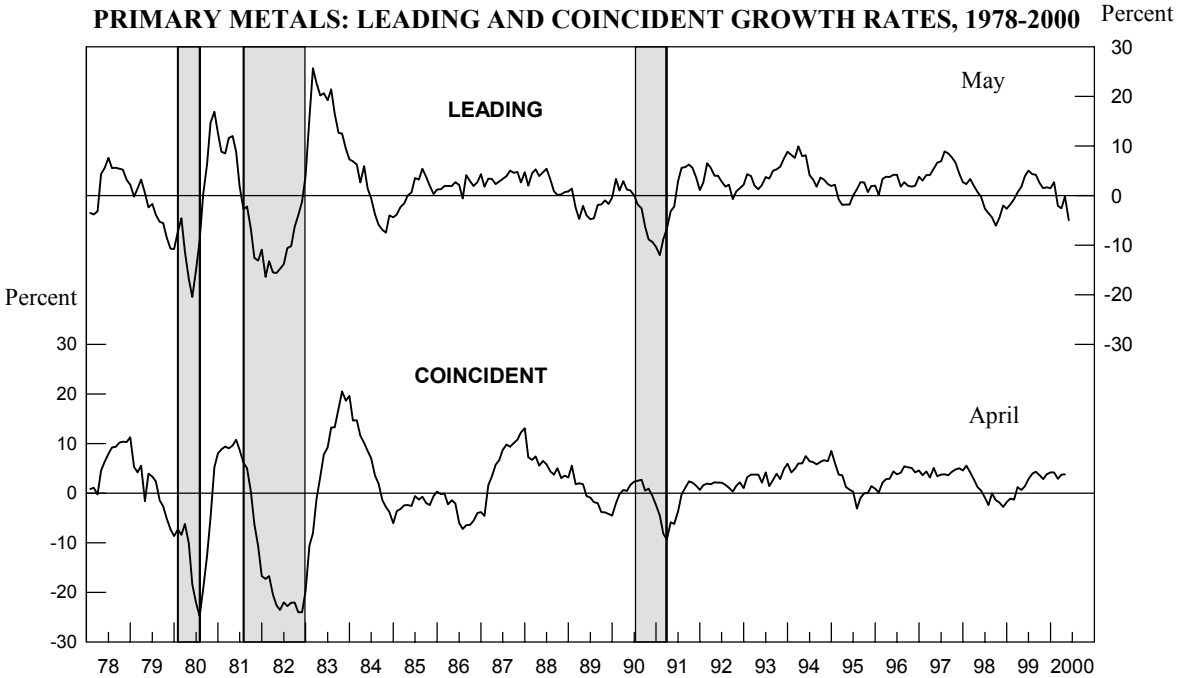
PRIMARY METALS: LEADING AND COINCIDENT INDEXES, 1978-2000



Shaded areas are business cycle recessions. Asterisks (*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

CHART 3.

PRIMARY METALS: LEADING AND COINCIDENT GROWTH RATES, 1978-2000



Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

U.S. Geological Survey, June 2000

Table 4.
The Steel Industry Indexes and Growth Rates

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
1999				
May	112.5	5.3	99.9r	2.4r
June	112.9r	5.8r	100.1r	2.9r
July	112.7r	4.9r	100.8r	4.2r
August	113.2r	4.9r	101.7r	5.6r
September	111.3r	1.0r	101.6r	5.1r
October	111.9r	1.5r	102.1r	5.3r
November	112.8r	2.5r	103.0r	6.4r
December	112.9r	2.0	103.1r	5.6r
2000				
January	113.9r	3.1	103.2r	5.0r
February	111.5r	-1.4r	103.2r	4.0r
March	110.9	-2.3r	103.9r	4.5r
April	110.4	-3.1	103.2	2.6

r: *Revised*

Note: Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

Table 5.
The Contribution of Each Steel Index Component to the Percent Change in the Index from the Previous Month

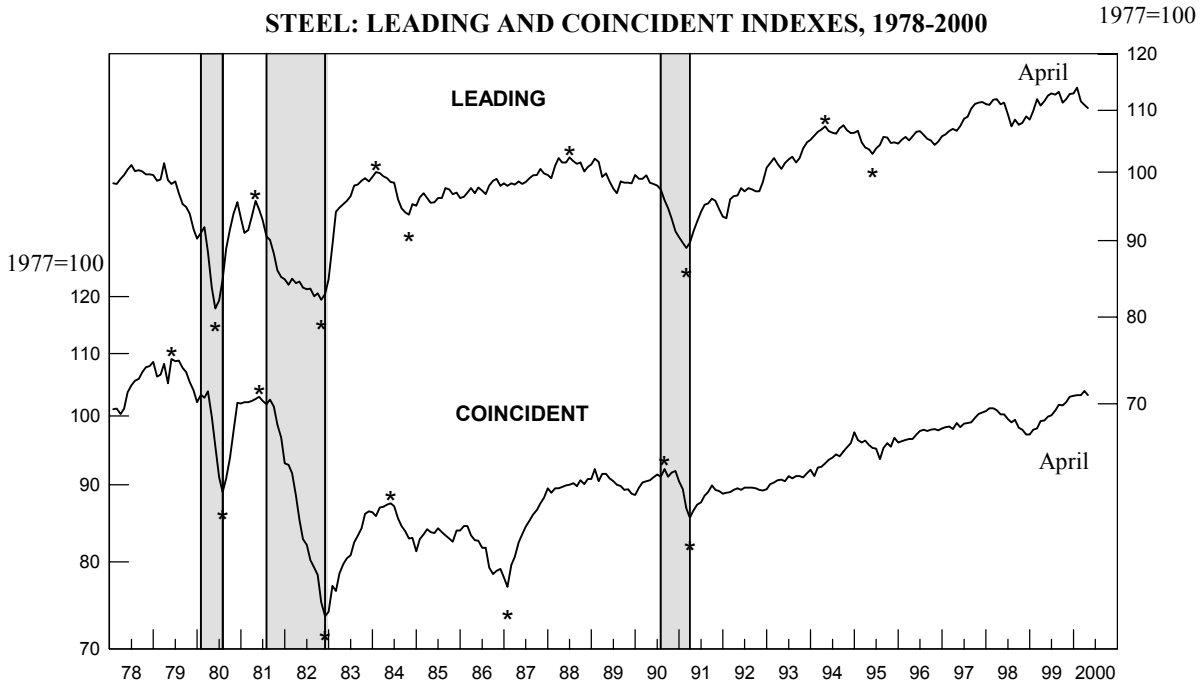
Leading Index	**March**	**April**
1. Average weekly hours, blast furnaces and basic steel products (SIC 331)	-0.1r	-0.1
2. New orders, steel works, blast furnaces, and rolling and finishing mills, 1982$, (SIC 331)	0.0r	-0.4
3. Shipments of household appliances, 1982$	0.1	-0.5
4. S&P stock price index, steel companies	-0.1	0.1
5. Industrial production index for automotive products	0.1	0.2
6. Growth rate of the price of steel scrap (#1 heavy melting, $/ton)	-0.2	-0.1
7. Index of new private housing units authorized by permit	-0.2r	-0.1
8. Growth rate of U.S. M2 money supply, 1996$	0.0r	0.5
9. Purchasing Managers' Index	-0.1	-0.1
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	-0.5	-0.5
Coincident Index		
1. Industrial production index, basic steel and mill products (SIC 331)	0.5r	0.2
2. Value of shipments, steel works, blast furnaces, and rolling and finishing mills (SIC 331), 1982$	0.3	-0.8
3. Total employee hours, blast furnaces and basic steel products (SIC 331)	-0.1r	-0.1
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	0.8r	-0.6

Sources: Leading: 1, Bureau of Labor Statistics; 2, Bureau of the Census and U.S. Geological Survey; 3, Bureau of the Census and U.S. Geological Survey; 4, Standard & Poor's; 5, Federal Reserve Board; 6, Journal of Commerce and U.S. Geological Survey; 7, Bureau of the Census and U.S. Geological Survey; 8, Federal Reserve Board, Conference Board, and U.S. Geological Survey; and 9, National Association of Purchasing Management. Coincident: 1, Federal Reserve Board; 2, Bureau of the Census and U.S. Geological Survey; 3, Bureau of Labor Statistics and U.S. Geological Survey. All series are seasonally adjusted, except 4 and 6 of the leading index.

r*: Revised*

CHART 4.

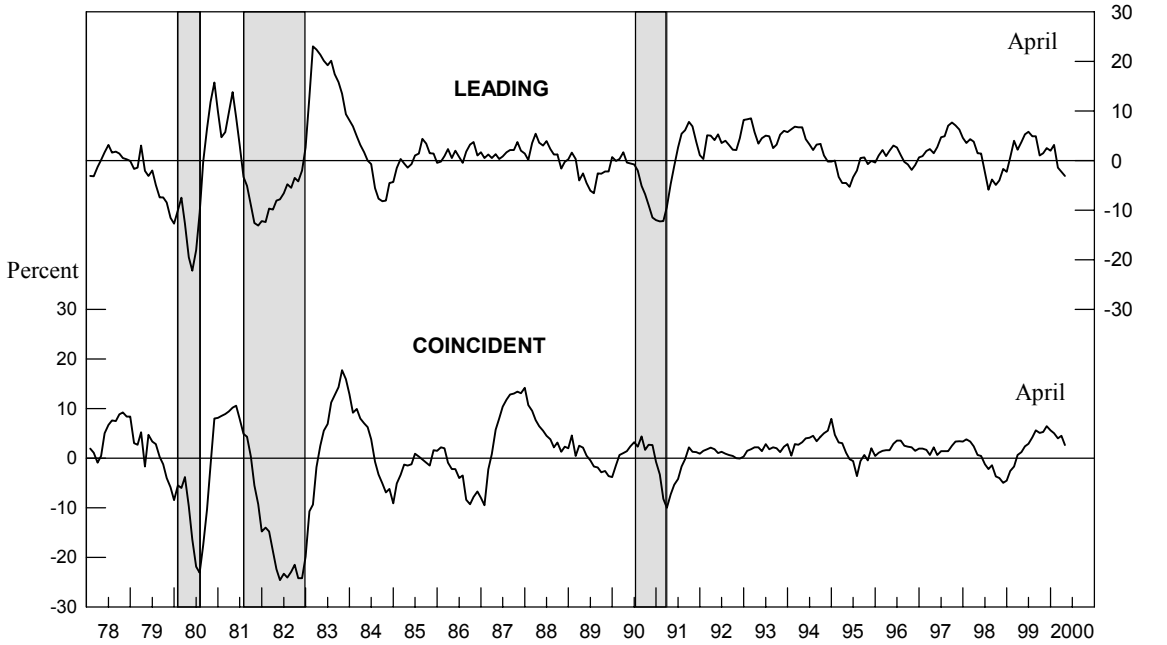
STEEL: LEADING AND COINCIDENT INDEXES, 1978-2000



Shaded areas are business cycle recessions. Asterisks (*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

CHART 5.

STEEL: LEADING AND COINCIDENT GROWTH RATES, 1978-2000



Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

U.S. Geological Survey, June 2000

Table 6.
The Aluminum Mill Products Industry Indexes and Growth Rates

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
1999				
May	157.9r	4.6r	141.7r	1.5
June	159.4r	5.8r	142.9r	3.0r
July	159.0r	4.4r	142.2r	1.9r
August	158.1r	2.6r	144.3r	4.8r
September	157.6r	1.7r	143.3r	3.2r
October	155.3r	-1.2r	143.1r	2.8r
November	155.2r	-1.5r	141.6r	0.5r
December	157.0r	0.4r	143.8r	3.0r
2000				
January	158.9r	2.5r	143.9r	2.7
February	158.1	1.1r	143.4r	1.5r
March	158.7r	1.5r	143.9r	1.6r
April	159.8	2.6	145.5	3.3

r: *Revised*

Note: Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

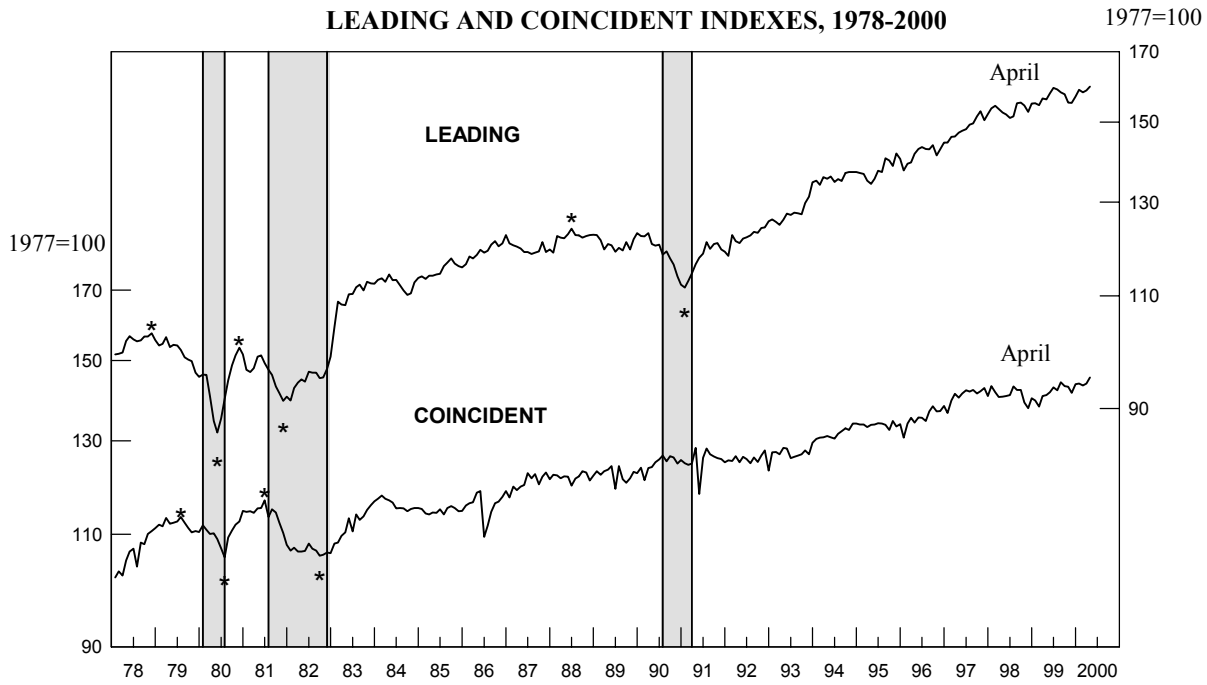
Table 7.
The Contribution of Each Aluminum Mill Products Index Component to the Percent Change in the Index from the Previous Month

Leading Index	**March**	**April**
1. Average weekly hours, aluminum sheet, plate, and foil (SIC 3353)	0.1r	0.6
2. Index of new private housing units authorized by permit	-0.2	-0.1
3. Industrial production index for automotive products	0.1	0.2
4. Construction contracts, commercial and industrial (square feet)	-0.1	-0.4
5. Net new orders for aluminum mill products (pounds)	0.6	-0.4
6. Growth rate of U.S. M2 money supply, 1996$	0.1	0.6
7. Purchasing Managers' Index	-0.2	-0.1
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	0.5r	0.5
Coincident Index		
1. Industrial production index, aluminum sheet, plate, and foil (SIC 3353)	0.2r	0.1
2. Total employee hours, aluminum sheet, plate, and foil (SIC 3353)	0.0r	0.8
Trend adjustment	0.2	0.2
Percent change (except for rounding differences)	0.4r	1.1

Sources: Leading: 1, Bureau of Labor Statistics; 2, Bureau of the Census and U.S. Geological Survey; 3, Federal Reserve Board; 4, F.W. Dodge, Division of McGraw-Hill Information Systems Company; 5, The Aluminum Association, Inc. and U.S. Geological Survey; 6, Federal Reserve Board, Conference Board, and U.S. Geological Survey; 7, National Association of Purchasing Management. Coincident: 1, Federal Reserve Board; 2, Bureau of Labor Statistics and U.S. Geological Survey. All series are seasonally adjusted.

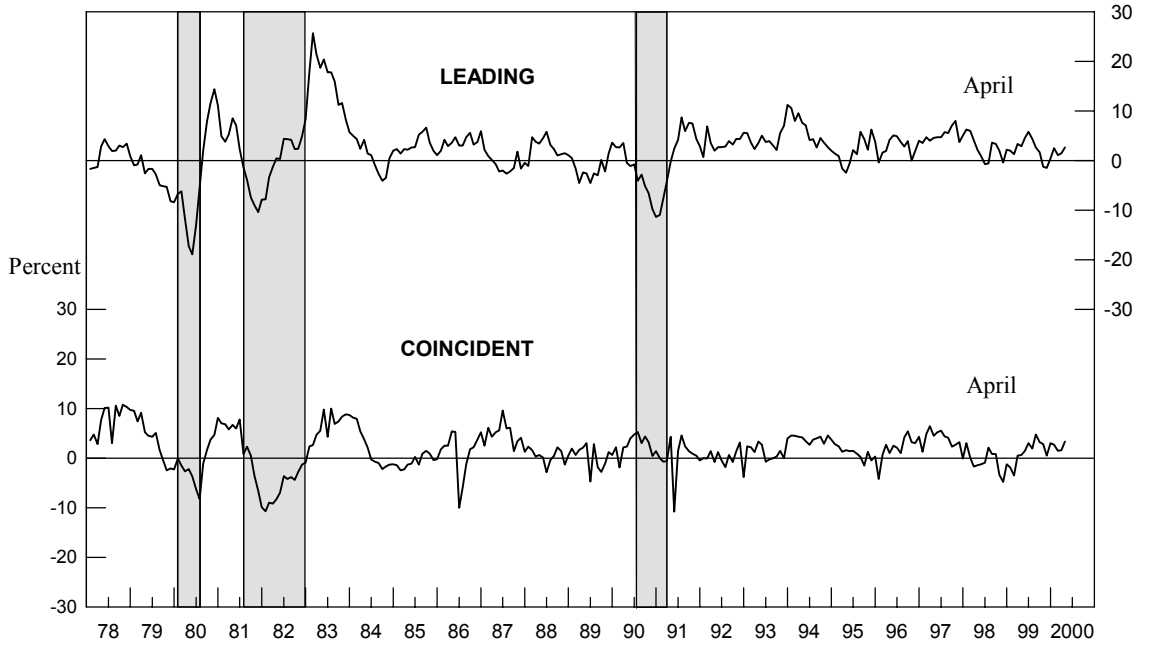
r: *Revised*

CHART 6.
ALUMINUM MILL PRODUCTS:
LEADING AND COINCIDENT INDEXES, 1978-2000



Shaded areas are business cycle recessions. Asterisks (*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

CHART 7.
ALUMINUM MILL PRODUCTS:
LEADING AND COINCIDENT GROWTH RATES, 1978-2000



Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

U.S. Geological Survey, June 2000

Table 8.
The Copper Industry Indexes and Growth Rates

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
1999				
May	130.6r	2.6r	123.4	-2.4
June	132.7r	5.2r	122.8	-3.1
July	133.4r	5.7r	123.0	-2.6
August	132.9r	4.4r	122.3r	-3.3r
September	132.4r	3.1r	121.2r	-4.6r
October	131.4r	1.0r	121.6r	-3.5r
November	130.5r	-0.7r	121.2r	-3.7r
December	130.0r	-1.5r	121.5r	-2.7r
2000				
January	131.2	0.1r	119.7r	-4.8r
February	128.1	-4.2r	121.5r	-1.7r
March	128.2r	-3.9r	121.5r	-1.2r
April	129.0	-2.7	120.8	-1.9

r: *Revised*

Note: Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

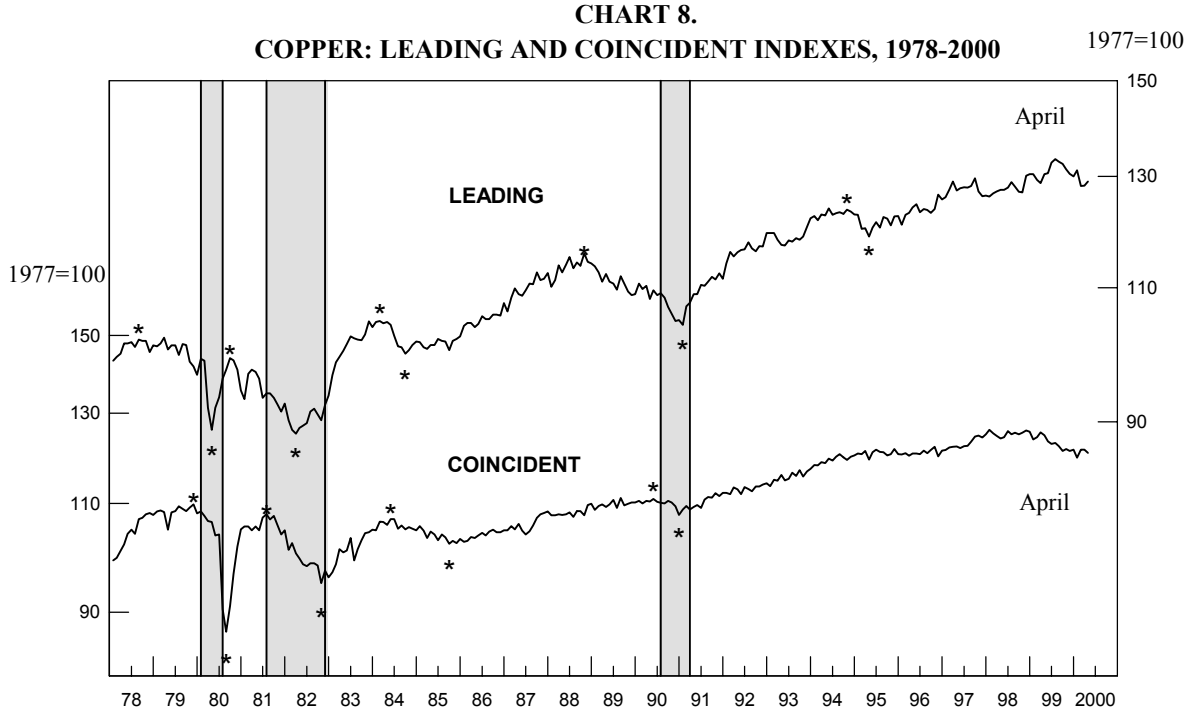
Table 9.
The Contribution of Each Copper Index Component to the Percent Change in the Index from the Previous Month

Leading Index	**March**	**April**
1. Average weekly overtime hours, rolling, drawing, and extruding of copper (SIC 3351)	-0.4r	0.4
2. New orders, nonferrous and other primary metals, 1982$	0.0	0.2
3. S&P stock price index, building materials companies	0.4	0.7
4. Ratio of shipments to inventories, electronic and other electrical equipment (SIC 36)	0.4r	-0.2
5. LME spot price of primary copper	0.1	0.0
6. Index of new private housing units authorized by permit	-0.2	-0.1
7. Spread between the U.S. 10-year Treasury Note and the federal funds rate	-0.3	-0.3
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	0.0r	0.7
Coincident Index		
1. Industrial production index, primary smelting and refining of copper (SIC 3331)	0.3r	0.0
2. Total employee hours, rolling, drawing, and extruding of copper (SIC 3351)	-0.5r	0.0
3. Copper refiners' shipments (short tons)	0.1	-0.7
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	0.0r	-0.6

Sources: Leading: 1, Bureau of Labor Statistics; 2, Bureau of the Census and U.S. Geological Survey; 3, Standard & Poor's; 4, Bureau of the Census and U.S. Geological Survey; 5, London Metal Exchange; 6, Bureau of the Census and U.S. Geological Survey; 7, Federal Reserve Board and U.S. Geological Survey. Coincident: 1, Federal Reserve Board; 2, Bureau of Labor Statistics; 3, American Bureau of Metal Statistics, Inc. and U.S. Geological Survey. All series are seasonally adjusted, except 3, 5, and 7 of the leading index.

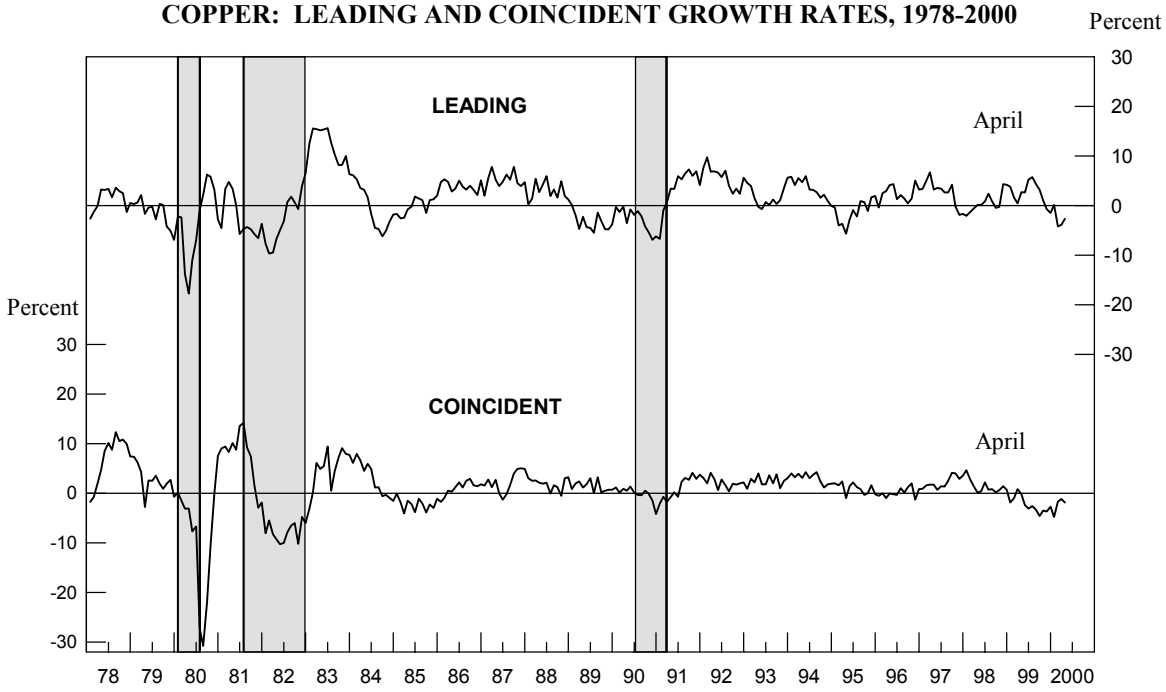
r: *Revised*

CHART 8.
COPPER: LEADING AND COINCIDENT INDEXES, 1978-2000



Shaded areas are business cycle recessions. Asterisks (*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

CHART 9.
COPPER: LEADING AND COINCIDENT GROWTH RATES, 1978-2000



Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

Explanation

Each month, the U.S. Geological Survey tracks the effects of the business cycle on five U.S. metal industries by calculating and publishing composite indexes of leading and coincident indicators. Wesley Mitchell and Arthur Burns originated the cyclical-indicators approach for the economy as a whole at the National Bureau of Economic Research in the mid-1930's. Over subsequent decades this approach was developed and refined, mostly at the National Bureau, under the leadership of Geoffrey H. Moore.[1]

A business cycle can briefly be described as growth in the level of economic activity followed by a decline succeeded by further growth. These alternating periods of growth and decline do not occur at regular intervals. Composite indexes, however, can help determine when highs and lows in the cycle might occur. A composite index combines cyclical indicators of diverse economic activity into one index, giving decision makers and economists a single measure of how changes in the business cycle are affecting economic activity.

The indicators in the metal industry leading indexes historically give signals several months in advance of major changes in a coincident index, a measure of current metal industry activity. Indicators that make up the leading indexes are, for the most part, measures of anticipations or new commitments to various economic activities that can affect the metal industries in the months ahead.

Composite coincident indexes for the metal industries consist of indicators for production, shipments, and total employee hours worked. As such, the coincident indexes can be regarded as measures of the economic health of the metal industries.

Four of the metal industry coincident indexes, those for primary metals, steel, primary aluminum, and aluminum mill products, reflect their classifications in the U.S. Standard Industrial Classification (SIC). The SIC is the main classification used by the United States government and industry in collecting and tabulating economic statistics. The coincident index for copper is a blend of two different copper industries, primary smelting and refining of copper and rolling, drawing, and extruding of copper.

Of the five metal industries, primary metals is the broadest, consisting of twenty-six different metal processing industries. The steel, aluminum, and copper industries are parts of the primary metals industry.

The metal industry leading indexes turn before their respective coincident indexes an average of 9 months for primary metals and 8 months for steel and copper. The average lead time for the primary aluminum leading index is 6 to 8 months, and the average lead time for the aluminum mill products leading index is 6 months.

[1]**Business Cycle Indicators, A monthly report from The Conference Board** (March 1996).

The leading index of metal prices, also published in the *Metal Industry Indicators*, is designed to signal changes in a composite index of prices for primary aluminum, copper, lead, and zinc traded on the London Metal Exchange. On average, this leading index indicates significant changes in price growth about 8 months in advance.

The growth rate used in the *Metal Industry Indicators* is a 6-month smoothed growth rate at a compound annual rate, calculated from a moving average. Moving averages smooth fluctuations in data over time so that trends can be observed. The 6-month smoothed growth rate is based upon the ratio of the latest monthly value to the preceding 12-month moving average.

$$\left[\left(\frac{\text{current value}}{\text{preceding 12-month moving average}}\right)^{\frac{12}{6.5}} - 1.0\right] * 100$$

Because the interval between midpoints of the current month and the preceding 12 months is 6.5 months, the ratio is raised to the 12/6.5 power to derive a compound annual rate.

The growth rates measure the near-term industry trends. They, along with other information about the metal industries and the world economy, are the main tools used to determine the outlook of the industries. A 6-month smoothed growth rate above +1.0% usually means increasing growth; a rate below -1.0% usually means declining growth.

The next summary is scheduled for release on MINES FaxBack at 10:00 a.m. EDT, Friday, July 21. Access MINES FaxBack from a touch-tone telephone attached to a fax machine by dialing 703-648-4999. The address for *Metal Industry Indicators* on the World Wide Web is: http://minerals.usgs.gov/minerals/pubs/mii/

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